

# Skin diseases

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Research

## Key Points

1. Lice in young calves may indicate underlying stress or poor nutrition.
2. Ringworm is a Zoonosis which means it can be transmitted to humans. Animals usually recover without treatment.
3. Spring eczema usually occurs when calves with well developed rumens are transitioned onto grass and by application of pour-on treatments at this time.
4. Facial eczema occurs in late summer and autumn and results from liver damage caused by a fungal toxin in pasture. Monitor spore counts and prevent with zinc treatment.



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Calf Rearing Fact Sheet 2.10

## Lice

- Lice are biting ecto-parasites that live on the skin of calves.
- Lice populations tend to be lower in summer. Calves that are poorly fed or under stress may become heavily infested with lice.
- Biting lice cause intense irritation leading to rubbing and hair loss
- Lice can be seen on the skin and eggs appear as white specks attached to the hair shaft. Examine the areas around the neck, shoulders and tail.
- Treatments for lice are usually a pour-on insecticide to the animal's back.

## Ringworm

- Dermatophytosis or "ringworm" is very common in young cattle. It is a highly infectious and contagious fungal disease caused by *Tricophyton verrucosum*. The disease is more prevalent in warm and humid climates.
- Lesions occur anywhere on the body but are most common on the head especially around the eyes. They are thick, round, greyish, crusty areas several centimetres in diameter and raised above the skin surface.
- Spontaneous recovery usually occurs so treatment is not normally undertaken. The lesions may persist for 1-4 months.
- Ringworm is a zoonosis so is transmittable to humans. Take care handling infected calves and wash hands with an iodine based soap.



## Spring eczema

- Spring eczema is a well recognised problem that occurs in recently weaned calves. Most cases occur in calves that have been reared intensively on grain and low milk diets to promote early rumen development.
- These calves have a large rumen capacity and their liver is not able to cope with the enormous supply of chlorophyll and its metabolite, phytoporphyrin. This accumulates in the bloodstream and skin. The reaction with sunlight results in an acute photosensitisation producing sunburn-like lesions.
- Treatment with chemicals to combat lice and worms at this critical time (i.e. when calves are introduced to pasture) can predispose calves to this condition. This is because metabolising the drug places additional demands on the liver.
- Calves develop a swelled, reddened, flaky or scabby skin on the white areas of the skin, usually along the back. This can become thick and leathery which eventually peels and leaves red, inflamed tissue underneath.
- Affected calves should be housed out of direct sunlight or have access to shade. Allowing them to graze at night helps to prevent further damage to the skin.
- Treatment with anti-inflammatory drugs and anti-histamines can be beneficial. Application of zinc based ointments (Filtabac) can be used to block out the effects of the sun.



## Facial eczema

- Facial eczema is caused by the ingestion of a toxin (sporidesmin) which is contained in the spores of the fungus *Pithomyces chartarum*.
- This fungus grows and produces large numbers of toxic spores in conditions of high humidity and warm overnight temperatures in late summer and autumn. The fungus grows on the dead litter of pastures, with highest concentrations of spores in the base of the sward.
- The disease tends to be associated with perennial ryegrass because of its ability to produce dead litter. Clover, kikuyu, paspalum and tall fescue pastures are safer than ryegrass dominant pastures.
- The toxin causes damage to the liver resulting in an obstructive jaundice. Phytoporphyrin accumulates in the bloodstream and skin and results in photosensitisation. This photosensitisation tends to occur 2 weeks after exposure to the toxin and is characterised by irritation, reddening and swelling of exposed hairless (eyes/ears/nose/inside hind legs) and non-pigmented skin. The calves rub the affected area on branches or posts and large areas of skin may fall off.
- Most calves are affected sub-clinically and have poor growth rates. Diagnosis is made by blood tests for elevated liver enzymes indicating liver damage.
- The control of facial eczema involves monitoring spore counts on grasses to identify danger periods; spraying pasture with fungicides to prevent growth of the fungus, grazing management to avoid high risk pastures; administering zinc as a preventative to minimise the toxic effect of sporidesmin on the liver.